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10/047,766	01/15/2002	Nachiappan Annamalai	ARIBP049	5172

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VAN PELT, YI & JAMES LLP
10050 N. FOOTHILL BLVD #200
CUPERTINO, CA 95014

EXAMINER	
SHRESTHA, BIJENDRA K	

ART UNIT	PAPER NUMBER
3691	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptocorrespondence@ip-patent.com

Office Action Summary	Application No.	Applicant(s)	
	10/047,766	ANNAMALAI ET AL.	
	Examiner	Art Unit	
	BIJENDRA K. SHRESTHA	3691	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21,24-27 and 29-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21, 24-27 and 29-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Claims 1-21, 23-27 and 29-32 are presented for examination. Applicant filed an amendment on 12/16/2010 amending claims 1, 16-17, 21, 24-25 and 27, and canceling claim 23. After careful consideration of applicant's amendments and arguments, new ground of rejections of claims necessitated by applicant amendment has been established in the instant application as set forth in detail below. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-21, 23-27 and 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable by Davenport et al., U.S. Pub No. 2003/0033236 (reference A in attached PTO-892) in view of Li et al., U.S. Pub. No 2003/0004850 (reference B in attached PTO-892) and Notani, U.S. Patent No. 7,260,550 (reference C in attached PTO-892) further in view of Bergstrom, U.S. Pub No. 2002/0156667 (reference D in attached PTO-892) and Sandholm et al., U.S. Patent No. 7,716,101 (reference E in attached PTO-892).

3. As per claim 1, Davenport et al. teach a method for multiple award optimization bidding in online auctions (see Fig. 1) comprising:

receiving, from a buyer, a price ceiling for a resource and a tolerance that describes a desired quantity of the resource; soliciting a plurality of bids from a plurality of suppliers, the bids having a unit price and a quantity (see Fig. 1; paragraph [0036] and [[0037]; where buyer provides request-for-quote (RFQ) and purchases different items of varying quantities for cheapest overall price; RFQ provides details of purchase request including quantity desired and price limit for the resource);

validating the bids received in response to the soliciting; generating, using a processor, an optimal solution with the validated bids (see Fig. 3; paragraph [0036] and [0040]);

comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (see paragraph [0081-0082] and [0093]; where Bid B1of Supplier1 is a optimal solution having optimal quantities of items {1, 2, 3} which is obtained by comparing prices and

quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids; Paragraph [0093] considers timestamp information into bid prices such that price related to B1 (p1) = $100.01; price related B2 (p2) = $30.02 and price related to B3 (p3) = $70.003 and by comparing Optimal price bid B1 with combined bid of B2 and B2, the integer programming solved the problem with result bid B1 as the lowest Optimal Bid)).

Sandholm et al. also teach comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (Sandholm et al., column 16, lines 48-54; column 30, lines 28-51 (claim 1)).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value of Davenport et al. because Sandholm et al. teach including above features would enable to declare the winning bid in the auction (Sandholm et al., column 3, lines 21-23).

Davenport et al. teach minimum quantity assigned to each supplier (see Fig. 11(b); paragraph [0077]).

Davenport et al. <u>do not teach buyer request for resource includes at least one of a minimum desired quantity of the resources and maximum desired quantity of the resource.</u>

Li et al. teach buyer request for resource includes minimum desired quantity and maximum desired quantity (Li et al., Fig. 32, constraints (1) and (2); paragraph 0162];

where constraint (1) and (2) represents maximum and minimum number of units of items required by the buyer).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of resource of Davenport et al. because Li et al. teach including above features would ensure that the number of units of each item, when summed across all suppliers is within the constraint of maximum and minimum required quantity defined by the buyer (Li et al., paragraph [0162[).

Notani also teaches buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different (Notani, Fig. 4, Lower Quantity Limit (526): 8000, Upper Quantity Limit (528): 10000; column 10, lines 41-50).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different of Davenport et al. because Notani teach including above features would enable buyer to defer determination of exact quantity required until a later time when the buyer can more accurately determine its actual supply needs reducing supply / demand mismatches (Notani, column 2, lines 9-13).

Davenport et al. <u>do not teach the optimal solution having an optimal quantity is consistent with the tolerance and an optimal unit price</u>.

Bergstrom teaches the optimal solution having an optimal quantity_is consistent with the tolerance and an optimal unit price (Bergstrom; Fig. 1 , 2 and 6; paragraph [0029-0031], [150-155]; where optimal solution is obtained using optimization engine and selected optimal units of items A, item B and item C for optimal cost of the units consistent with *budget constraint 17*).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to include the optimal solution having an optimal quantity is consistent with the tolerance and an optimal unit price of Davenport et al. because Bergstrom teaches including above features would enable to allocate business operation to maximize profits (Bergstrom, paragraph [0006]).

4. As per claim 2, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. teach the method comprising:

denying the bids if at least one of an optimal solution cannot be generated and the optimal unit price is not less than the compare value (see paragraph [0066].

5. As per claim 3, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. teach the method wherein the validating comprises:

calculating a total cost of each bid; evaluating the quantity of each bid against a quantity of another supplier's bid and the unit price of each bid against a unit price of another supplier's bid; checking the quantity of each bid against a quantity of a previous bid and the total cost of each bid against a previous total cost (see paragraph [0081] and [0082]);

comparing the unit price for each bid against the price ceiling (see paragraph [0066]); and

rejecting the bid if the bid does not meet the set of rules, the set of rules including the unit price of the bid not being less than the price ceiling, the quantity of the bid not being less than the quantity of a previous bid and the total cost of the bid not being greater than the previous total cost, and the quantity of the bid not being equal to the quantity of at least one other supplier's bid and the unit price of the bid not being equal to the unit price of at least one other supplier's bid (see paragraph [0040]).

6. As per claim 4, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein the generating comprises:

using non-linear programming to determine a decision variable for each bid; including each bid having the decision variable that matches an optimal parameter in the optimal solution; and calculating the optimal unit price and the optimal quantity from the included bids (see paragraph [0081] and [0082]).

7. As per claim 5, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein the generating comprises:

minimizing the optimal unit price; and maximizing the optimal quantity (see paragraph [0036], [0081] and [0082]).

8. As per claim 6, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein

the generating comprises:

assigning a decision variable matching the optimal parameter to a bid from a preferred supplier (see Fig. 2; paragraph [0038]; page 6, column 2, claim 1); and

calculating the optimal solution to include the bid from the preferred supplier (see Fig 2 and 3; paragraph [0036]).

9. As per claim 7, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein the generating comprises:

calculating the optimal solution based upon at least one of a minimum number and maximum number of suppliers chosen by the buyer (see Fig. 2, step 201; paragraph [0073]).

10. As per claim 8, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method comprising:

notifying the suppliers of the bids in the optimal solution (see Fig. 2, step 204; Paragraph [0038]); and

refreshing a display of the bids with each new bid (see Fig. 2, step 206; paragraph [0039] and [0083]).

11. As per claim 9, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 8 as described above. Davenport et al. further teach the method wherein the notifying comprises:

displaying a ranked ordering of submitted bids in accordance with the optimal solution (see paragraph [0038] and [0039]; the Examiner interprets feedback to the bidders displays a ranked ordering of the submitted bids).

12. As per claim 10, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein the soliciting comprises:

identifying at least one of goods and services to be purchased (see paragraph [0004]).

13. As per claim 11, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method comprising:

notifying the bidders that the bids are not accepted if a total quantity calculated from the quantity from all bids does not meet the tolerance (see paragraph [0038]; the examiner interprets that the feedback is provided to all of the bidders).

14. As per claim 12, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method comprising:

allowing the buyer to change the tolerance if at least one of the bids is not validated and the optimal solution is not generated (see paragraph [0080]).

15. As per claim 12, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method comprising wherein the soliciting comprises:

providing a range of values for at least one of the quantity and the unit price (see paragraph [0072]).

16. As per claim 14, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein the generating comprises:

calculating the optimal solution based on at least one of payment terms, cost, percentage, lead time, discounts and other parameters that are quantifiable as numbers (see paragraph [0048]).

17. As per claim 15, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 1 as described above. Davenport et al. further teach the method wherein the generating comprises:

determining, as the optimal solution, a lowest overall optimal solution set of bids; and providing the optimal quantity and the optimal unit price, the optimal quantity being a sum of quantities from the solution set of bids and the optimal unit price being an average of the unit prices from the solution set of bids (see paragraph [0081] and [0082]).

18. As per claim 16, Davenport et al. teach a method for multiple award optimization bidding in online auctions comprising:

receiving, from a buyer, a price ceiling for a resource and a tolerance that describes desired quantity of the for a resource; soliciting a plurality of bids from a plurality of suppliers, the bids having a unit price, a quantity, and a total cost (see Fig. 1;

paragraph [0036] and [[0037]; where buyer provides request-for-quote (RFQ) and purchases different items of varying quantities for cheapest overall price; RFQ provides details of purchase request including quantity desired and price limit for the resource));

accepting a most recent bid from a bidder (see paragraph [0083] and [0093];

calculating a total cost for the most recent bid; comparing the unit price for the most recent bid against the price ceiling (see paragraph [0081] and [0082];

checking the quantity of the most recent bid against a quantity of a previous bid from the bidder and the total cost of the most recent bid against a previous total cost of the bidder; evaluating the quantity of the most recent bid against a quantity of another supplier's bid and the unit price of the most recent bid against a unit price of another supplier's bid; rejecting the bid if at least one of the unit price of the most recent bid is not less than the price ceiling, the quantity of the most recent bid is less than the quantity of the previous bid from the bidder and the total cost of the most recent bid is greater than the previous total cost of the bidder, and the quantity of the most recent bid is equal to the quantity of current bids from at least one other supplier and the unit price of the most recent bid is equal to the unit price of the current bids from at least one other supplier (see paragraph [0093]);

determining a decision variable for the current bids and the most recent bid if the most recent bid is not rejected (see paragraph [0083]);

generating, using a processor an optimal solution from a lowest overall optimal solution set of the most recent bid that satisfies an objective function and constraints and the current bids that satisfies an objective function and constraints, the optimal

quantity being a sum of quantities from an optimal solution set of bids, the optimal unit price being an average of the unit price from the solution set of bids (see paragraph [0081-0082] and [0093]; where Bid B1of Supplier1 is a optimal solution having optimal quantities of items {1,2,3} which is obtained by comparing prices and quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids);

denying the most recent bid if an optimal solution cannot be generated; comparing the optimal unit price to a compare value; evaluating whether the decision variable of the most recent bid matches the optimal parameter; replacing the compare value with the optimal unit price if the optimal unit price is not equal to the compare value and the decision variable of the most recent bid matches the optimal parameter comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (see paragraph [0081-0082] and [0093]; where Bid B1of Supplier1 is a optimal solution having optimal quantities of items {1, 2, 3} which is obtained by comparing prices and quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids; Paragraph [0093] considers timestamp information into bid prices such that price related to B1 (p1) = $100.01; price related B2 (p2) = $30.02 and price related to B3 (p3) = $70.003 and by comparing Optimal price bid B1 with combined bid of B2 and B2, the integer programming solved the problem with selection of bid B1price as the lowest Optimal Bid));

notifying the suppliers, in real time, that the most recent bid is in the optimal solution if the decision variable matches the optimal parameter (see paragraph [0038] and [0039]); and

accepting the most recent bid if the decision variable does not match the optimal parameter (see paragraph [0083]).

Sandholm et al. also teach comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (Sandholm et al., column 16, lines 48-54; column 30, lines 28-51 (claim 1)).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value of Davenport et al. because Sandholm et al. teach including above features would enable to declare the winning bid in the auction (Sandholm et al., column 3, lines 21-23).

Davenport et al. teach minimum quantity assigned to each supplier (see Fig. 11(b); paragraph [0077]).

Davenport et al. <u>do not teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource.</u>

Li et al. teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity resources, wherein the minimum and maximum are different (Li et al., Fig. 32, constraints (1) and (2); paragraph 0162]; where

constraint (1) and (2) represents maximum and minimum number of units of items required by the buyer which are not equal).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource of Davenport et al. because Li et al. teach including above features would ensure that the number of units of each item, when summed across all suppliers is within the constraint of maximum and minimum required quantity defined by the buyer (Li et al., paragraph [0162[).

Notani also teaches buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different (Notani, Fig. 4, Lower Quantity Limit (526): 8000, Upper Quantity Limit (528): 10000; column 10, lines 41-50).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different of Davenport et al. because Notani teach including above features would enable buyer to defer determination of exact quantity required until a later time when the buyer can more accurately determine its actual supply needs reducing supply / demand mismatches (Notani, column 2, lines 9-13).

Davenport et al. <u>do not teach the optimal solution having an optimal quantity that is consistent with the tolerance and an optimal unit price</u>.

Bergstrom teaches the optimal solution having an optimal quantity that is consistent with the tolerance and an optimal unit price (Bergstrom; Fig. 1; paragraph [0029-0031], [150-155]; where optimal solution is obtained using optimization engine and selected optimal units of items A, item B and item C for optimal cost of the units consistent with *budget constraint 17*).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to include the optimal solution having an optimal quantity that is consistent with the tolerance and an optimal unit price of Davenport et al. because Bergstrom teaches including above features would enable to allocate business operation to maximize profits (Bergstrom, paragraph [0006]).

19. As per claim 17, Davenport teach a method for bidders to determine an optimal bid comprising:

receiving, from a buyer, a price ceiling for a resource and a tolerance that describes desired quantity of the resource (see Fig. 1; paragraph [0036] and [[0037]; where buyer provides request-for-quote (RFQ) and purchases different items of varying quantities for cheapest overall price; RFQ provides details of purchase request including quantity desired and price limit for the resource));

receiving at least one bid from a supplier, generating, using a processor, an optimal bid using the inputted value (see paragraph [0081] and [0082]; where bids received from suppliers with item price and bid B1 is determined to be an optimal bid); and

supplying at least one of a corresponding value necessary to reach the optimal bid and a no feasible solution result (see paragraph [0083]; where a rule stating that the bid that was made in earlier time in time is preferred optimal bid when there are identical bids. This rule is applicable in simple or multi-item forward or reverse auction only and but harder to enforce in combinatorial and volume discount auction).

Davenport et al. teach minimum quantity assigned to each supplier (see Fig. 11(b); paragraph [0077]).

Davenport et al. do not teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource.

Li et al. teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource (Li et al., Fig. 32, constraints (1) and (2); paragraph 0162]; where constraint (1) and (2) represents maximum and minimum number of units of items required by the buyer which are not equal).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of resource of Davenport et al. because Li et al. teach including above features would ensure that the number of units of each item, when summed across all suppliers is within the constraint of maximum and minimum required quantity defined by the buyer (Li et al., paragraph [0162[).

Notani also teaches buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are

different (Notani, Fig. 4, Lower Quantity Limit (526): 8000, Upper Quantity Limit (528): 10000; column 10, lines 41-50).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different of Davenport et al. because Notani teach including above features would enable buyer to defer determination of exact quantity required until a later time when the buyer can more accurately determine its actual supply needs reducing supply / demand mismatches (Notani, column 2, lines 9-13).

Davenport et al. <u>do not teach the optimal solution having an optimal quantity and an optimal unit price</u>.

Bergstrom teaches the optimal solution having an optimal quantity and an optimal unit price from at least one supplier (Bergstrom; Fig. 1; paragraph [0029-0031], [150-155] where optimal solution is obtained using optimization engine and selected optimal units of items A, item B and item C for optimal cost of the units consistent with *budget constraint 17*).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to include the optimal solution having an optimal quantity and an optimal unit price of Davenport et al. because Bergstrom teaches including above features would enable to allocate business operation to maximize profits (Bergstrom, paragraph [0006]).

20. As per claim 18, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 17 as described above. Davenport et al. further teach the method wherein the tolerance includes a maximum quantity and a minimum quantity and the supplying comprises:

rejecting the value if at least one of the new unit price is greater than the price ceiling, the new quantity is less than the minimum quantity, and the new quantity is greater than the maximum quantity and requesting a different value (see paragraph [0072], [0083]).

21. As per claim 19, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 17 as described above. Davenport et al. further teach the method wherein the generating comprises:

using non-linear programming to determine a decision variable that matches an optimal parameter; and calculating one of an optimal unit price and an optimal quantity (see paragraph [0082]).

22. As per claim 20, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 17 as described above. Davenport et al. further teach the method wherein the generating comprises:

minimizing the corresponding value if the inputted value is a new unit price (see paragraph [0083]; and

maximizing the corresponding value if the inputted value is a new quantity (see paragraph [0072]).

23. As per claim 21, Davenport t al. teach a system for multiple award optimization bidding in online auctions (see Fig. 1) comprising:

a database configured to receive from a buyer and store a price ceiling for a resource and a tolerance that describes a desired quantity of the resource, and also configured to receive from a plurality of suppliers a plurality of bids for the resource, the bids having a unit price and a quantity (see Fig. 1; paragraph [0036] and [[0037]; where buyer provides request-for-quote (RFQ) and purchases different items of varying quantities for cheapest overall price; RFQ provides details of purchase request including quantity desired and price limit for the resource); Fig. 3, step 300; paragraph [0040]); and

a processor configured to validate the bids and generate an optimal solution (see Fig.3, step 304; paragraph [0036] and [0040]),

compare the optimal unit price to a compare value; and replace the compare value with the optimal unit price if the optimal unit price is less than the compare value and the optimal parameter matches the constraint (see paragraph [0081-0082] and [0093]; where Bid B1of Supplier1 is a optimal solution having optimal quantities of items {1, 2, 3} which is obtained by comparing prices and quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids; Paragraph [0093] considers timestamp information into bid prices such that price related to B1 (p1) = $100.01; price related to B2 (p2) = $30.02 and price related to B3 (p3) = $70.003 and by comparing Optimal price bid B1 with combined bid of B2 and B2, the integer programming solved the problem selecting bid B1 price as the lowest Optimal Bid)).

Sandholm et al. also teach comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (Sandholm et al., column 16, lines 48-54; column 30, lines 28-51 (claim 1)).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value of Davenport et al. because Sandholm et al. teach including above features would enable to declare the winning bid in the auction (Sandholm et al., column 3, lines 21-23).

Davenport et al. teach minimum quantity assigned to each supplier (see Fig. 11(b); paragraph [0077]).

Davenport et al. <u>do not teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource</u>

Li et al. teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource (Li et al., Fig. 32, constraints (1) and (2); paragraph 0162]; where constraint (1) and (2) represents maximum and minimum number of units of items required by the buyer).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource of Davenport et al. because Li et al. teach including above features would ensure that the number of

units of each item, when summed across all suppliers is within the constraint of maximum and minimum required quantity defined by the buyer (Li et al., paragraph [0162[).

Notani also teaches buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different (Notani, Fig. 4, Lower Quantity Limit (526): 8000, Upper Quantity Limit (528): 10000; column 10, lines 41-50).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different of Davenport et al. because Notani teach including above features would enable buyer to defer determination of exact quantity required until a later time when the buyer can more accurately determine its actual supply needs reducing supply / demand mismatches (Notani, column 2, lines 9-13).

Davenport et al. <u>do not teach the optimal solution having an optimal quantity</u> that <u>is consistent with the tolerance, an optimal unit price and an optimal parameter</u>.

Bergstrom teaches the optimal solution having an optimal quantity that is consistent with the tolerance, an optimal unit price and an optimal parameter (Bergstrom; Fig. 1; paragraph [0029-0031] and [150-155] where optimal solution is obtained using optimization engine and selected optimal units of items A, item B and item C for optimal cost of the units consistent with *budget constraint 17*).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to include the optimal solution having an optimal quantity that is consistent with the tolerance, an optimal unit price and an optimal parameter of Davenport et al. because Bergstrom teaches including above features would enable to allocate business operation to maximize profits (Bergstrom, paragraph [0006]).

24. As per claim 24, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 21 as described above. Davenport et al. further teach the system wherein

the processor is configured to calculate a total cost of each bid, compare the unit price for each bid against the price ceiling, check the quantity of each bid against a quantity of a previous bid and the total cost of each bid against a previous total cost, evaluate the quantity of each bid against a quantity of another supplier's bid and the unit price of each bid against a unit price of another supplier's bid, reject the bid if the bid does not meet a set of rules that include the unit price of the bid not being less than the price ceiling, the quantity of the bid not being less than the quantity of a previous bid and the total cost of the bid not being greater than the previous total cost, and the quantity of the bid not being equal to the quantity of at least one other supplier's bid and the unit price of the bid not being equal to the unit price of at least one other supplier's bid (see paragraph [0081] and [0082]).

25. As per claim 25, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 21 as described above. Davenport et al. further teach the system wherein

the processor is configured to receive a value for one of a new unit price and a new quantity, generate an optimal bid using the value, and supply at least one of a

corresponding value necessary to reach the optimal bid and a no feasible solution result (see paragraph [0080]).

26. As per claim 26, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 21 as described above. Davenport et al. further teach the system wherein

the optimal quantity is a sum of quantities from an optimal solution set of bids, the optimal unit price is an average of the unit price from the solution set of bids, and the optimal parameter is a decision variable (see paragraph [0081] and [0083]).

27. As per claim 27, Davenport et al. teach a computer program product for multiple award optimization bidding in online auctions, the computer program product being embodied in a computer readable storage medium and comprising computer instructions for:

receiving from a buyer and storing a price ceiling for a resource and a tolerance that describes a desired quantity of the resource and also configured to receive from a plurality of suppliers a plurality of bids for the resource, the bids having a unit price and a quantity (see Fig. 1; Server; Buyer Private Market Place (100)); paragraph [0036] and [[0037]; where buyer provides request-for-quote (RFQ) and purchases different items of varying quantities for cheapest overall price; RFQ provides details of purchase request including quantity desired and price limit for the resource);

validating the bids (see Fig. 1; Server (100); Fig. 3; paragraph [0040]); and

generates an optimal solution (see Fig. 3, step 304; paragraph [0040]),

comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value and the optimal parameter matches a constraint (see paragraph [0081-0082] and [0093]; where Bid B1of Supplier1 is a optimal solution having optimal quantities of items {1, 2, 3} which is obtained by comparing prices and quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids; Paragraph [0093] considers timestamp information into bid prices such that price related to B1 (p1) = $100.01; price related B2 (p2) = $30.02 and price related to B3 (p3) = $70.003 and by comparing Optimal price bid B1 with combined bid of B2 and B2, the integer programming solved the problem with selection of bid B1 price as the lowest Optimal Bid)).

Sandholm et al. also teach comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (Sandholm et al., column 16, lines 48-54; column 30, lines 28-51 (claim 1)).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value of Davenport et al. because Sandholm et al. teach including above features would enable to declare the winning bid in the auction (Sandholm et al., column 3, lines 21-23).

Davenport et al. teach minimum quantity assigned to each supplier (see Fig. 11(b); paragraph [0077]).

Davenport et al. <u>do not teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource</u>

Li et al. teach buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource (Li et al., Fig. 32, constraints (1) and (2); paragraph 0162]; where constraint (1) and (2) represents maximum and minimum number of units of items required by the buyer).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes at least one of minimum desired quantity and maximum desired quantity of the resource of Davenport et al. because Li et al. teach including above features would ensure that the number of units of each item, when summed across all suppliers is within the constraint of maximum and minimum required quantity defined by the buyer (Li et al., paragraph [0162[).

Notani also teaches buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different (Notani, Fig. 4, Lower Quantity Limit (526): 8000, Upper Quantity Limit (528): 10000; column 10, lines 41-50).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to add buyer request for resource includes minimum desired quantity and maximum desired quantity, wherein the minimum and maximum are different of Davenport et al. because Notani teach including above features would enable buyer to defer determination of exact quantity required until a later time when the

buyer can more accurately determine its actual supply needs reducing supply / demand mismatches (Notani, column 2, lines 9-13).

Davenport et al. do not teach the optimal solution having an optimal quantity that is consistent with tolerance, an optimal unit price and an optimal parameter.

Bergstrom teaches the optimal solution having an optimal quantity that is consistent with tolerance, an optimal unit price and an optimal parameter (Bergstrom; Fig. 1; paragraph [0029-0031]; where optimal solution is obtained using optimization engine and selected optimal units of items A, item B and item C for optimal cost of the units consistent with *budget constraint 17*).

Therefore, it would be obvious to one of ordinary skill in the art at the time the invention was made to include the optimal solution having an optimal quantity that is consistent with tolerance, an optimal unit price and an optimal parameter of Davenport et al. because Bergstrom teaches including above features would enable to allocate business operation to maximize profits (Bergstrom, paragraph [0006]).

28. As per claim 29, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 27 as described above. Davenport et al. further teach the computer program product wherein

the optimal solution is generated by minimizing the optimal unit price and number of suppliers and maximizing the optimal quantity (see paragraph [0036], [0072], [0081] and [0082]).

29. As per claim 30, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 27 as described above. Davenport et al. further teach the computer program product wherein

the optimal quantity is a sum of quantities from a combination of bids, the optimal unit price is an average of the unit price from the combination of bids, and the optimal parameter is a decision variable (see paragraph [0082]).

30. As per claim 31, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 27 as described above. Davenport et al. further teach the computer program product wherein

the bids are validated by calculating a total cost of each bid, comparing the unit price for each bid against the price ceiling, checking the quantity of each bid against a quantity of a previous bid and the total cost of each bid against a previous total cost, evaluating the quantity of each bid against a quantity of another supplier's bid and the unit price of each bid against a unit price of another supplier's bid and rejecting the bid if the bid does not meet the set of rules, including the unit price of the bid not being less than the price ceiling, the quantity of the bid not being less than the quantity of a previous bid and the total cost of the bid not being greater than the previous total cost, and the quantity of the bid not being equal to the quantity of at least one other supplier's bid and the unit price of the bid not being equal to the unit price of at least one other supplier's bid (see paragraph [0081], [0082] and [0083]).

31. As per claim 32, Davenport et al. in view of Li et al. further in view of Bergstrom teach claim 27 as described above. Davenport et al. further teach the computer program product comprising

a fourth readable code that receives a value for one of a new unit price and a new quantity, generates an optimal bid using the value, and supplies at least one of a corresponding value necessary to reach the optimal bid and a no feasible solution result (see paragraph [0080]).

Response to Arguments

32. New ground of rejections of claims necessitated by applicant amendment has been established in the instant application. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Examiner respectively disagrees that Davenport et al. do not teach comparing the optimal unit price to a compare value and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value and the optimal parameter matches a constraint. Davenport teach Bid B1of Supplier1 is a optimal solution having optimal quantities of items {1, 2, 3} which is obtained by comparing prices and quantities of Bid2 of Supplier2 and Bid3 of Supplier3 and their time of the bids (see paragraph [0077, 0081-0083). Davenport further considers timestamp information into bid prices such that price related to B1 (p1) = $100.01; price related B2 (p2) = $30.02 and price related to B3 (p3) = $70.003 and the integer programming compare Optimal price bid B1 with combined bid of B2 and B2 and select price of bid

B1 as the lowest Optimal Bid)). Sandholm et al. also teach comparing the optimal unit price to a compare value; and replacing the compare value with the optimal unit price if the optimal unit price is less than the compare value (Sandholm et al., column 16, lines 48-54; column 30, lines 28-51 (claim 1)).

As per claim 17, Davenport et al. teach implementing rule stating that *the bid that was made in earlier time in time is preferred optimal bid when there are two identical bids* and but no feasible solution result. This rule is applicable only in simple or multi-item forward or reverse auction but it harder to enforce in combinatorial and volume discount auction.

Conclusion

33. The prior art made of record and not relied upon is considered pertinent to applicant's disclosures. Applicant is required under 37 CFR 1.111(c) to consider references fully when responding to this action.

The following are pertinent to current invention, though not relied upon:

Alaia et al. (U.S. Patent No. 6,199,050) teach method of and system for bidding in an electronic auction using flexible bidder-determined line-item guidelines.

Alsberg et al. (U.S. Pub No. 2001/00332162) teach methods and systems for market clearance

Heimermann et al. (U.S. Patent No. 7,110,976) teach centralized, requisition driven, order formulating, e-procurement method using reversed auction.

Iida (U.S. Patent No. 5,587,897) teaches optimization device for producing optimal solution.

Jordan (U.S. Pub No. 2002/0069157)) teaches exchange fusion

La Mura et al. (U.S. Patent No. 7,058,602) teach enhanced auction mechanism for online transactions.

Pishevar et al. (U.S. Patent No. 7,124,107) teach collective procurement management system.

Rackson et al. (U.S. Patent No. 6,415,270) teach multiple auction coordination method and system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bijendra K. Shrestha whose telephone number is (571)270-1374. The examiner can normally be reached on 7:00AM-4:30 PM (Monday-Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexander Kalinowski can be reached on (571)272-6771. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Bijendra K. Shrestha/
Examiner, Art Unit 3691
02/26/2011